

The Guaraná Industry In Brazil

Carlos Miguel Barber Kuri, Universidad Anáhuac México Sur, México

ABSTRACT

Brazil is undoubtedly a country that has many viable natural resources that it can make the most of. The guaraná, in this particular case, is a fruit that only grows in this region of the Amazon and which gives this country the opportunity to position itself competitively in the soft drink industry. It is no wonder that the exploitation of this fruit is not exclusively in the hands of the Manues Indian anymore and has become a product that has helped generate national wealth.¹

SOME FACTS ABOUT BRAZIL

*B*razil is located in the eastern part of South America and its coast lies on the Atlantic Ocean. It is the largest and most populated country in Latin America.



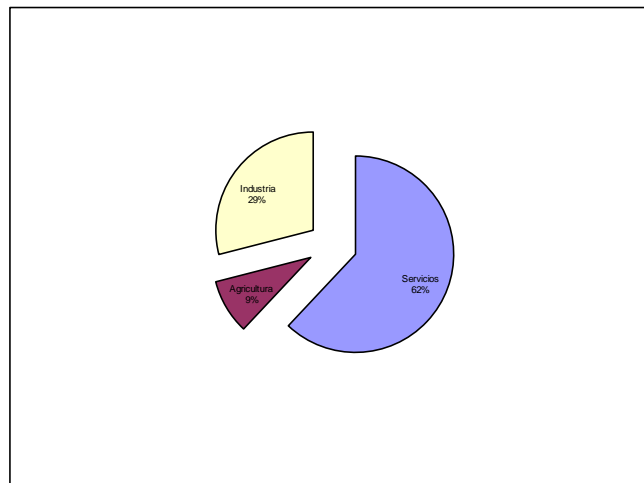
In the past, it was the center of a dispute between Spain and Portugal, and was under Portuguese rule for more than three centuries. Later, it became an independent nation in 1822, the year when Brazil built up an empire under the dominion of Peter I of Braganza, who in 1831 abdicated to his son Peter II. Years later, he was dethroned during an uprising and a republic was formed. It was in this way that Brazil overcame more than half a century of continuous military intervention. Later on, uprisings and revolutions prevailed in the country. Several presidents tried to give this nation a touch of reformism that was so badly needed, but it was not until a new constitution was promulgated in 1969 by a military council, that the country was able to recover its political freedom.

To date, Brazil is still trying to increase and develop its industry and agriculture, which it plans to achieve thanks to its great workforce. Meanwhile, Brazil boasts of being the main economic power in South America and one of the regional leaders of Latin America.

Included in Brazil's main exports are equipment for transportation, iron, shoes, coffee and automobiles. Most of its imports are made up of machinery, electric and transportation equipment, and chemical products, among others.

¹ Several different documents were used to draw up this case and are cited throughout this paper. The following is a synthesis of this information and is presented for academic purposes.

The collaboration of MBA Juan Carlos Lara Martínez, Professor Gabriela Bleck Padierna and Karla Rosa Dávila Hernández in revising and preparing this document is greatly appreciated

Figure 1: Economic Formation by Sectors ²Table 1: Facts about Brazil 2003-2004 ³

Capital	Brasilia
Surface	8,511,965
Population	184,101,109
Language	Portuguese
Currency	Real ⁴
Gnp Per Capita	\$7,600
Gnp Growth	-0.2%
Unemployment	12.3%
Exports	73.28 billion
Imports	48.25 billion

Regardless of the above, the distribution of income in the country is quite uneven and represents one of Brazil's greatest problems.⁵

Figure 2: Official Currency



² Instituto Investigación Económica Aplicada. Graph: The World, see website:

<http://www.elmundo.es/especiales/2002/10/internacional/brasil/cifras.html>

³ Cf. "Brazil" The CIA World Fact Book (2004) <http://www.cia.gov/cia/publications/factbook/geos/br.html> (19 de febrero del 2005)

⁴ Note: A Brazilian "real" is worth \$2.94 US dollars; Exchange rate Feb. 2005.

⁵ Cf. "Historia de Brasil." "Microsoft Encarta 2004"

Additional Information:

- 34% of Brazilians make a living on less than \$30 dollars a month
- population growth: 0.91%
- mortality rate: 9.34/1000 inhabitants
- life expectancy: 63.24 years

THE LEGEND OF THE “GUARANÁ”

The guaraná is, par excellence, one of the most important products in Brazil, however, it was only consumed by the Maues Indian for many centuries, which is why they have written legends that try to explain the origin and shape of this fruit. One version of the legend is as follows:

“Old tongues relate that there once lived in a tribe on the banks of the Maues River, a virtuous couple whose only child was a true angel who healed the sick, appeased the enemy, and helped his neighbors find happiness.

One day, Yarupary, the spirit of evil, felt envious and taking advantage of the fact that this young boy was alone turned into a cobra and killed him. His parents shed many tears for the loss of their son and invoked Tupá, the God of the Indians, to return to them the life of their only son. Tupá answered their plea, and in the shape of a ray of light, asked them to plant the boy's eyes. A sacred plant would grow from them that would give food and cure sickness and pain. They watered the earth and a strong plant was born which they called “guaraná”, consecrated by Tupá. It would be this plant that would prolong the life of the tribe and would give it strength and health.⁶

This legend gives us a good idea of why the Maues Indian is considered to be a strong and healthy ethnos.

BACKGROUND OF THE GUARANÁ INDUSTRY

The guaraná plant has been around for a long time, even before the conquest of America. The Indians in the Amazon, in particular, the Maues, discovered the fruit and called it guaraná; they dried its seeds and crushed them with the tongue of the “pirarucu” fish (*Arapaima gigas*) which is very rough. Then they dissolved this powder in water and obtained a refreshing drink that filled them with energy and vigor.⁷

After some time, naturalists and historians began documenting the discovery and conquest of America, and though it may seem incredible, since the 18th and 19th centuries, knowledge about this plant and its enormous virtues became increasingly more abundant.

At the beginning of the last century, the Maues Indians had a “monopoly” on the production and commerce of guaraná in the Río Negro and Tapajo region, and the lower Amazon. To the north of this region, the natives of Venezuela were grating this fruit and were also dissolving it in water to form a bitter beverage that could restore strength after long vigils and fatigue.

The guaraná became a popular beverage towards the end of the last century, which is the main reason why the government has implemented measures for the protection of the ecology in these areas. Nowadays, it is used in almost all of South America and is slowly making its way into Europe.⁸

⁶ Cf. BOSTERS, Damián. “Nutrición Plena. Savia Guaraná Mágica. Fruto de una Hermosa Leyenda”. Artículo. Herbalife. México.

⁷ Cf. Amazonas Products. “Guaraná, la Fuerza de la Naturaleza. Punto de Venta. Argentina.

⁸ Cf. BOSTERS, Damián “Nutrición plena. Savia Guaraná Mágica” Fruto de una Hermosa Leyenda. Artículo. Herbalife.

WHAT IS THE GUARANÁ?

The scientific name of the guaraná is *Paullinia cupana*. Its name comes from C.F. Paullini, a German botanist and doctor who lived in the 18th century. The term “guaraná” varies from country to country and from language to language; for example, in Venezuela it is called “cupana”, in English speaking countries it is called “guarana bread”, in Brazil “guaraná-uva”, in Italy “guaraná”, “paullinia” in French and “guaranágebende” in German.

The red seeds of this climbing plant found in the jungles of South America are toasted and ground into a powder that is mixed with water or rolled into little sticks, a substitute for the midday meal while the Amazon Indian is hunting. It sharpens the mind and keeps the user awake since it helps lower your pulse and reduces your appetite.⁹

The plant is a woody, sarmentose¹⁰ vine that tends to entangle itself and that can reach up to 12 meters high. When grown outdoors, it grows as high as 2 to 3 meters. It has alternate leaves composed of 5 lanceolated¹¹ and dentated folioles.¹² It has buds that are made up of a cluster of auxiliary spikes with greenish-yellow flowers. It is classified as a bush.

Its fruit is a red capsule shaped as if it was an oval or a pear with a short peak. It has six containers shaped like ribs that keep the fruit together as one seed.

Figure 3: A Guaraná (*Paullinia cupana*); Inflorescences in Clusters.



13

The seeds of the guaraná are dark brown and are the size of small grapes, similar in texture to cashew nuts. It is easy to remove the seeds when the fruit is dry.

⁹ Cf. WARBURTON Diana “Guía de Afrodisiacos”. Editorial Tellus.

¹⁰ Note: the term “sarmentose” means a climbing, woody branch or stem. Rf. Larousse Diccionario Enciclopédico (2000). Primera Edición. 3^{era} Reimpresión. Querétaro, México. P. 1088.

¹¹ Note: “lanceolated, said of a laminar organ of any plant that ends in the shape of a lance or spear. Rf. Diccionario Enciclopédico (2000). Primera Edición. 3^{era} Reimpresión. Querétaro, México. P. 514.

¹² Note: the term “foliole” represents each division of the limb of a compound leaf. Rf. Larousse Diccionario Enciclopédico (2000). Primera Edición. 3^{era} Reimpresión. Querétaro, México. P. 698.

¹³ Note: Photograph of the guaraná fruit.

Figure 4: Fruit in a Capsule



Figure 5: Trilocular Ovary



The seeds are made up of 3.5 – 5% caffeine; they also have, although in a smaller quantity, Theobromine, theophylline and several other purines. Tannin, saponine, resin, mucilage, starch and red coloring can also be found.¹⁵

THE GUARANÁ AND ITS AVAILABLE FORMS

The guaraná is so versatile that it can be found in different presentations:

- *Guaraná in stick form:* when the branches are dry, they are placed on a moderate fire until they become hard.
- *Toasted guaraná:* the seeds are roasted and sold to co-ops, middlemen and industries. They are roasted evenly for trade purposes and toasted in clay ovens for about four or five hours.
- *Syrup:* it is primarily used for the preparation of soft drinks and is normally limited to large industries, such as is the case of soft drink companies that use it as a natural flavoring in their products.
- *Powdered guaraná:* once it is ground and becomes a powder, it is mainly sold to retailers, for example, to those stores selling naturalistic medicine.

FARMING OF GUARANÁ

Majes is a region in the Amazon that is dedicated to the farming of guaraná. “At present, more than 50 per cent of its 6000 inhabitants (an approximate number) make a living from farming. They produce 400 tons annually and supply 80% of the Brazilian market.”¹⁶

No chemicals are used in growing the fruit, that is, no fertilizers or pesticides are used because it takes a long time for the plant to bear fruit (about 2 years).

Once the fruit is picked, it is toasted and the seed can be processed into different products. There are wood burning ovens in Majes that bake bread made from guaraná, since it is a basic staple in the local diet. You can also prepare a “healthy mix of lemonade and ground guaraná, known as “guaraná champagne”.”¹⁷

¹⁴ Note: Photograph of guaraná seeds.

¹⁵ Cf. “Medicinal plants in Brazil” Web page: <http://www.ecoaldea.com/plmd/brasil.htm> (February 20, 2005)

¹⁶Rf. Department of Agriculture in Brazil. Report. Brazil.

¹⁷Rf. “The fountain of youth is in the Amazon” <http://boards2.melodysoft.com/app?ID=misionerosweb&msg=21> (February 20, 2005)

In 1973, the Sociedad Agrícola de Maúes S.A. was created to process guaraná seeds. Based on the work done by the above- mentioned Department, it was later decided to form the Hacienda Santa Helena, to regenerate areas to be set aside for the cultivation of guaraná.¹⁸

Table 2: Industries That Use Guaraná And Yearly Amount.¹⁹

MARKET	AMOUNT (TONS)	SHARE (%)
Carbonated Soft Drink Industry	1,250	44
Extract, Syrup, Powder Industry	700	24,5
Laboratorios	600	21
"In Natura" Exports	300	10,5
Total	2,850	100

SOFT DRINK MARKET IN BRAZIL

The soft drink industry in Brazil “serves a population of 17 million people, with about a 53% market share; and consumes 180 8-ounce bottles per capita yearly.”²⁰ Brazil is the third largest producer of soft drinks worldwide and today guaraná is the fourth most consumed flavor in the world.

The Brazilian product portfolio is made up as follows:

Coca-Cola, Coca-Cola Light, Coca-Cola Light Lemon, Kuat Guaraná, Kuat Guaraná Light, Kuat Guaraná Naranja, Fanta, Sprite, Diet Sprite, Schweppes Tónica, Schweppes Citrus, Schweppes Club Soda, Kapo, Bum and Nestea.

MERGER TO CREATE AMBEV

Two great rivals in the soft drink and beer market in Brazil brought before the government an agreement signed by both of these soft drink companies, as well as by Pepsi Co. Including Pepsi Co was seen as a way to get the government to speed up the approval of the merger proceedings.

Brahma and Antarctica have come together to constitute the company AmBev. This new company now controls 70 per cent of the local beverage market.

AmBev is the seventh largest soft drink company in the world; it was originally called Compañía Antarctica Paulista and at present provides the necessary conditions for the internationalization of the Guaraná, the only true Brazilian soft drink. “Besides, it has taken it upon itself to find good reception in external markets because of the unique flavor and ecological appeal of the soft drink.”²¹

The guaraná is the only soft drink capable of threatening the dominant position of Coca-Cola in Brazil; the possibility for Coca-Cola to launch their own brand of guaraná is very remote. “In Brazil, Coca-Cola limited itself when promising that the flavor of its guaraná was the same as that of its rival. Guaraná Antarctica counterattacked with impertinent warnings.”²² Antarctica showed the world the main source of the product in question, a guaraná plant and exhorted Coca-Cola to show the world “a cola plant”.

¹⁸ Cf. “Producers of guaraná in the Amazon”. Official web page of Amber.

¹⁹ Cf. PEREIRA DE FARIA, José Juárez “Manual de Producción de Guaraná” Editorial SEBRAE. Brasil.

²⁰ Rf. “Análisis de Empresa Embotelladora Andina”. Bci Corredor de Bolsa S.A. Publicaciones.

²¹ Rf. Official web page of AmBev. www.ambev.com.br (February 20, 2005)

²² Rf. PENTEADO, Claudia “Guaraná For The World.” Article.

Concentrating on AmBex in 2002, this company registered a sales volume of around 1.8 billion liters of soft drink. Currently, it occupies 11th place on the list of most sold soft drinks in Portugal where the sales of Guaraná Antarctica rose 305% last year, reaching 4.5 million liters.

In countries like Spain and Puerto Rico, you can already find soft drinks made from Brazilian guaraná, this due to the fact that AmBev bet on the international commercialization of guaraná.

AmBev keeps up very friendly relations with the rural producers in the town of Maues, located 250 kilometers from Manaus in the Amazon, since this is the area where 100% of guaraná seeds come from, and from which the famous soft drink is produced.²³

Brazil must play its cards right at this moment to make the most of the agreement it has with Pepsi Co., so that it can begin procedures for the exportation of the fruit as well as for the already manufactured soft drink.

The products made from guaraná that AmBev now handles and markets are those that come from the companies that merged together to establish this important soft drink company.

THE GUARANÁ BRAHMA SOFT DRINK

This soft drink first appeared on the market in 1918. In 1994, its formula underwent several changes which were put to the test in just one city in Brazil. Due to its great acceptance, the new Guaraná Brahma was launched in the State of Sao Paulo and in Minas Gerais.

The presentation of the soft drink has been modified as well. In 1996, the new Guaraná Brahma was presented in a 500 ml can. Today this container is off the market.²⁴



25

THE GUARANÁ ANTARCTICA SOFT DRINK

It was first produced in 1989. “Guaraná Antarctica” is the absolute leader of soft drinks made from guaraná, with 33% of the market share in Brazil.²⁶ It is distributed in nearly 750 thousand sales outlets in all Brazil.

The brand Guaraná Antarctica has an annual sales volume of 800 million liters, which is why it is considered one of the 15 most sold soft drinks on the planet. A change of ingredients has allowed Guaraná Antarctica to launch a product on the market with the same flavor but with no sugar in its formula.

²³ Cf. UITA. Latin American Regional Department. Montevideo, Uruguay

²⁴ Cf. www.ambev.com.br. “Beverage Company of the Americas” (February 20, 2005)

²⁵ Note: Photograph of soft drink Guaraná Brahma. www.guarana.gr.jp/.../guarana/brama/brama.html. (February 20, 2005)

²⁶ www.ambev.com.br. “Beverage Company of the Americas”. (February 20, 2005)



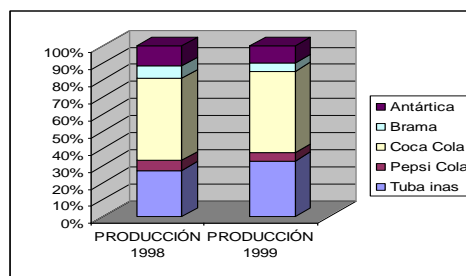
27

Between 1999 and 2000, “even though the soft drink market grew considerably, the large producers lost some of their hold, opening the way for less popular brands,”²⁸, only Coca-Cola managed to keep its market share, but only after lowering its prices.

Table 3: Evolution of Market Share in Brazil ²⁹

COMPANY	PRODUCTION 1998	PRODUCTION 1999
Tuba Inas	27.1	32.7
Pepsi Cola	5.8	4.8
Coca Cola	48	47.7
Brama	7.5	4.6
Antártica	11.6	10.2

Graph 1: Evolution of Market Share in Brazil



GUARANÁ IN EXTERNAL MARKET

The Antarctica group, as well as AmBev, is trying to strengthen their position in the external market. Antarctica has considered implementing a franchise system in countries like China, Japan, the USA and some others

²⁷ Guarana Antarctica, the product.

http://www.ambev.com.br/images/produtos/refrigerantes/antarctica/img_esq_guarana_antarctica.gif
(February 20, 2005)

²⁸ Source: Revista Bebidas. Vol. 107

²⁹ Idem

in Europe. The marketing policies it has already implemented are truly powerful and undoubtedly threaten large soft drink companies that have the highest percentages of the internal market share.

The Brahma Group, on the other hand, will focus its efforts on producing the extract in Manaus, where they will produce all the syrup needed for its carbonated soft drink, and according to Nelson Brandão Jr., \$39 million dollars have been invested in the construction of its plant.³⁰

“Coca-Cola (company that nowadays also distributes guaraná soft drinks) invested \$100 million dollars in an extract plant in Manaus, to sell to the Latin American market.”³¹

Abroad, products made from Guaraná must face the fact that not all countries welcome them and this represents a marketing challenge for those companies in charge of commercializing the product.

It is also convenient to take into account the case of Spain, where the Comunidad Autónoma de Valencia banned the consumption of energizing beverages, ice creams and food additives made from guaraná and caffeine; however, since there are no scientific tools that can prove the position that Valencia took, the Comisión Europea decided to ask Spain to withdraw its ban; petitions were issued as motivated judgments (which is the second stage of infringement proceedings by virtue of Article 226 of the E.C. Treaty), all of the above by virtue of the fact that the inhabitant in this region can acquire products that allow for a better quality of life, because of their medicinal benefits.³²

GUARANÁ USED AS MEDICINE

Among the scientists of the world, guaraná is already considered one of the most beneficial natural medicines we can find. Because of its properties, it can help cure, or at least treat, a countless number of sicknesses that people suffer from.

Some of these benefits are:

- It is an effective gastrointestinal regulator since it disinfects the intestine and helps combat diarrhea and an upset stomach.
- It can work on muscles and diminish fatigue.
- It can work on the nervous system and help stimulate the intellect.
- It stimulates your mood and helps as an antidepressant.
- It increases gastric acid secretion and works as a diuretic.
- It stimulates cardiac activity and dilates the blood vessels, thus helping circulation.
- It controls “PMS”.
- It protects against hepatitis.
- It greatly helps reduce the appetite and consequently, lose weight.
- Its leaves when cooked can be used as a plaster; they are placed on wounds and cuts and help disinfect and heal even though there may be an infection. Its bark, when cooked, works in the same way.

Undoubtedly, the medicinal benefits provided are many, but we should also take into account its negative side effects, which are as follows:

- It can not be used by those people suffering from nervous disorders.
- Those prone to suffer from constipation, serious cardiovascular alterations, gastritis, and ulcers, epilepsy and insomnia should be careful when using it.
- It should not be used frequently during pregnancy or when breastfeeding

³⁰ Cf. *Gazeta Mercantil* (June 11, 1998)

³¹ Rf. PEREIRA DE FARIA, José Juárez. “Manual on Production of Guaraná” Editorial SEBRAE.

³² Cf. News from food sector and food industry. www.infoarliament.com (February 21, 2005)

- It may cause nervousness and hypersensitivity
- It may become addictive in some cases

Figure 4: NRG GUARANÁ (In Tablet and Powder Form) Peru



OTHER USES

This tropical plant, besides its already mentioned medicinal properties, can practically be used in its entirety.

The branches, for example, are used by the Satare-Mawé Tribe to make figurines, a popular item among tourists who visit the area. It is widely available in powder form and can be mixed with water or juice and sugar to prepare an energizing beverage. In Europe, the guaraná is marketed for this very purpose and some retailers even promote it as an aphrodisiac. The syrup is used to make carbonated soft drinks that are quite popular in Brazil. As well, the syrup, as we already mentioned, is one of the products needed to prepare the soft drinks made from guaraná.

Table 4: Properties of the Plant ³³

Raw proteins	12.18 %
Fats	2.80 %
Moisture	2.90 %
Carbohydrates	73.63 %
Ashes	1.79 %
Calories	350 Kcal por 100g
Raw fiber	11 %
Tannin	10.8 %
Calcium	92.3 mg/100g
Phosphorus	144 mg/200g
Starch	40 %
Potassium	609 mg/100g
Vitamin A	375UI/100mg
Iron	6.2 mg/100g
Reducing Sugars	4.4 %

³³ Cf. Alimento 10. Herbalife

SOME INTERESTING FACTS

- One capsule of powdered guaraná is equivalent to drinking a cup of coffee but with a longer lasting effect.
- Guaraná is an aphrodisiac.
- It is the fruit that symbolizes Brazil although it is also grown in Venezuela.
- It has been used by natives for centuries and was first exploited at the beginning of the last century.
- Soft drinks made from guaraná are affecting the market share of large companies like Coca-Cola.
- It helps lose weight since it reduces the appetite.
- It is also called: Guaraná, cupana in Venezuela, guaraná bread in English, guaraná-uva in Brazil, guaraná in Italy, paullinia in France and guaranágebende in Germany.

CONCLUSIONS**Representative Industries**

The positioning of representative industries of a country in the worldwide scene, may have an important economic and image impact. That's how; nowadays Guarana is worldwide recognized as a characteristic fruit from Brazil, although it could also be found in Venezuela. Nevertheless, this positioning is not made in an accidental way, since years, Brazil has been strongly working in the positioning and optimization of Guarana.

According to the study case of Brazil, it is possible to affirm that when it's tried to find a competitive advantage of a country that potentially can become in a representative industry, ideas come from anywhere but, particularly it's important to search on ancient traditions, uses and society's customs. In the case of Guarana, for example, it has been used by natives since centuries and it has just been exploited in an industrial way on the last century.

Market, Economy And Public Policies

In relation with market and economy, basing in this case of study, it is possible to conclude that the representative industry of a country, well managed, can compete in global markets and in local levels with enterprises of worldwide range as Coca Cola. National producers have in Brazil a market share of more than 50% and the mark Guarana Antartica represents 33% of it. There is also the existence of barriers of entry to products that represent a competitive advantage as we can see in the case of Valencia, Spain.

On the other hand, the case of Guarana in Brazil, invites the reflexion and deepness of the importance that public policies have in the protection of competitive advantages in a country, adding the strong impact on the behaviour of local markets, its structure, the barriers of entry to new competitors and other factors. Competence is always positive to improve, but it is necessary to look the adequate conditions that don't affect local or national producers. To elaborate adequate public policies it is necessary to consider the main issues of countries like Brazil and many other undeveloped nations, as the existent inadequate distribution of richness.

Strategy

The information exposed in this case, allows identifying that the positioning of a representative industry is not permanent and the market forces generate important changes that makes necessary to give an adequate answer.

Some strategies followed by Brazilian enterprises are to search new markets in which the same product can be distributed, new ways to process raw material and diversify the product as for example, not only offer soda but invest in making syrups or on technology of raw material extraction.

Fruit Properties And Future Opportunities

Guarana is a fruit with multiple and important properties, between of them: it gives energy, contributes to mental health, maintains on alert to those who consume it and reduces appetite. It is not surprising that ethnic societies consume it with multiple ends due to the wide list of properties.

It is a long way and lot of opportunities can arise because the possible uses of Guarana are multiple, as the advantage of use of all parts of the plant.

NOTES